Western Washington Amateur Relay Association
Proposed
Coordination Policies
Final Draft

The WWARA is a voluntary association of relay system owners and individuals who are authorized to operate in the amateur repeater sub band spectrum identified in CFR 47, Part 97. The Association has collectively determined that the coordination of relay systems is essential to maximize the finite spectrum resources allocated to amateur radio and minimize the interference between systems and individuals who are authorized to operate in the repeater sub band. The success of the Association is solely dependent on those amateurs who actively cooperate and participate in spectrum management and contribute to the coordination processes. A major goal of the WWARA is to educate and assist individuals who are authorized to operate in the repeater sub band spectrum identified in CFR 47, Part 97 in suggested operation of relay stations.

The WWARA shall not act as a spectrum enforcer for CFR 47 Part 97. All parties must realize that the amateur spectrum is a fragile and finite resource and abuse can spoil it for everyone now and in the future. Coordination by its name implies cooperation. Any party wishing to develop and operate a relay system should feel obligated to seek the synergy of existing relay system operators and individuals who are authorized to operate in the repeater sub band through WWARA coordination / recommendation, prior to placing any relay system in operation.

The FCC has stated that where the transmission of a repeater causes harmful interference to another repeater, the two station licensees are equally and fully responsible for resolving the interference unless the operation of one station is recommended by a frequency coordinator and the operation of the other station is not. In that case, the licensee of the non-coordinated repeater has the primary responsibility to resolve the interference. Additionally the WWARA hopes to educate and assist individuals who are authorized to operate in the Amateur repeater sub band spectrum identified in CFR 47, Part 97 in the methods of operation to eliminate interference to relay systems and others who share this fragile and finite resource.

The WWARA will accept application from any duly licensed individual or amateur group and will issue a Certificate of Coordination based on the following policies and procedures. However the WWARA reserves the right to deny requests for Certificate of Coordination to applicants or to revoke Certificates of Coordination for those who refuse to abide by these WWARA Coordination Policies and Procedures.

The WWARA does not issue Certificates of Coordination, channelize, or attempt to create band plans for simplex frequencies falling outside the area reserved for repeater inputs or outputs as defined by CFR 47 Part 97.

The boundaries of the WWARA coordination responsibility are:
North - The U.S.A. – Canadian Border
East - The Cascade Mountain Crest
South- The southern boundary of the WWARA is on the West of the Oregon Washington border eastward up the Columbia river to a point just north of Woodland, then eastward through I-5 exit #21 to the Lewis river then eastward to its beginning then eastward to the Cascade Crest.
West - Pacific Ocean

Section 1: REPEATER COORDINATION PARAMETERS AND GUIDELINES
All coordinations / recommendations are for a specific:

a. Frequency(s)
b. Transmitter location (latitude and longitude)
c. Effective Radiated Power
d. Radiation pattern (directional, non directional*, etc.)
e. Elevation (AMSL, AGL
f. Individual or designated individual
g. Access Method
h. Period of Time

This information is considered public information.

*Use of directional antennas may be an essential part of any given coordination

All new Certificates of Coordination shall indicate the use of continuous tone(s) (CTCSS, DTMF, DPL, Frequency Shift Data, etc.) as a means of system access. Other means of access like cheap beep are not acceptable.

The following are guidelines for sharing repeater pairs:

a. Shared frequency shall not cause harmful interference. Harmful interference is defined in CFR 47, Part 97 as interference which endangers the functioning of radio navigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radio communication service operating in accordance with the Radio Regulations. Hearing the output of another co-channel system on the frequency is not considered harmful interference of and by itself.
b. No fixed mileage separation criteria can be used between co-channel or adjacent channel systems.
c. Receiver coverage of a repeater is a large factor in determining the coverage of a system. Those systems with a number of voting receivers, receivers at elevations higher than the repeater transmitter or system operating with excessive transmitter power will not have extended coordination protection.
d. Repeater DX'ing by users may cause unintended interference to co-channel systems but is not a matter for WWARA action.

Section 2: ACCESS, HEIGHT, POWER, FREQUENCY OR LOCATION CHANGES

Coordination is based on information provided by the applicant and contained on the WWARA Technical Data Sheet. If a coordination holder significantly changes the location, access, antenna height or pattern, effective radiated power, frequency, or other operating parameters of his system, the repeater will be required to be re coordinated. The WWARA secretary shall be notified in writing on the appropriate form. Re-cordination is required to verify that interference to or from other repeaters does not occur. Recoordination is not to allow another repeater or proposed repeater to be assigned to the frequency. Note: Significant change shall be a power change of 1 db, an antenna height change of more that 25 feet or a horizontal move of more than 1500 feet. For the 1db power change the WWARA uses a factor of .75 or 1.25 of the original power. For example a 100-watt ERP station multiplied by .75 would be 75 watts, or multiplied by 1.25 would be 125 watts.

Section 3: HARMFULL INTERFERENCE

The WWARA shall consider interference harmful when the interference fulfills the requirements in CFR47, Part 97. When the WWARA becomes aware the presence of harmful interference between two coordinated systems the parties will be asked by the appropriate WWARA Band Committee Chairman to work to resolve the issue to their mutual satisfaction. Should this not resolve the issue, the WWARA may with the support of all parties appoint a mediator and or ask for an independent evaluation from the Technical Committee. The WWARA reserves the right to terminate its coordination recommendation to any system whose COC holder refuses to cooperate in a process to mitigate the interference.

Section 4: PROCESSING FEES

Processing fees are used by the WWARA to offset cost incurred by the Association in processing the applicant's application and to offset ongoing expenses of keeping Certificate of Coordination holders informed of activities that may impact their operation.

a. All applicants seeking a Certificate of Coordination shall pay a non refundable Application Processing Fee.
b. Certificate of Coordination holders wishing to renew their Certificate of Coordination or transfer their Certificate of Coordination shall pay a renewal-processing fee.

Section 5: FREQUENCY AND BAND SELECTION

Applicants are encouraged to request certain band and frequencies. It is the responsibility of the Association to determine whether or not the applicant's request is feasible and can be made workable and if not, to review alternatives.

Section 6: RESPONSIBILITY OF THE APPLICANT

a. An applicant for WWARA Coordination services shall be assumed to have read and understood the Bylaws and Coordination Policies of the Association and by making application for coordination agrees to abide by them.
b. It is the responsibility of the applicant to make a case to the WWARA that their proposed operation is feasible and will not violate any FCC rules, especially CFR 47, part 97.3 as it applies to interference to and existing user of the intended spectrum.
c. Where co-channel use is contemplated, it shall be the responsibility of the applicant to provide the association with verifiable documentation that such operation will not cause harmful interference as defined in CFR 47, part 97.3 to other coordinated users of the spectrum.
d. Applicants shall make themselves available to the WWARA for the purpose of supplying additional information as may be required in the coordination process.
e. The applicant may be requested to be present at the general business meeting where final approval will be given to answer any questions that may be forthcoming from the membership.

Section 7: RESPONSIBILITY OF THE COORDINATION COMMITTEE

a. To work with applicants to determine the suitability of their proposals.
b. To explain if required, the coordination process and to direct them to where they may obtain copies of the WWARA Bylaws and Coordination Policies.
c. To direct and or supply the applicants with appropriate portions of the database.
d. To work with the applicant as an advocate to assist them with the coordination process.
e. To work with adjacent area coordinators as it applies to the request of the applicant. All such communications shall be copied to the Operations Remailer.
f. To communicate to the Board and Membership regarding the coordination process.

Section 8: PRELIMINARY APPLICATION

Applicants are encouraged at any time to contact a Coordination Committee to:

a. Determine the suitability of their application.
b. Determine whether co-channel issues require mitigation or other technical issues that would impact a formal application.
c. Obtain assistance in the preparation of a formal application.
d. Obtain permission for site and or channel testing.

Such informal activities are not recorded by the Secretary and are considered Preliminary Actions; however, the Coordination Committee shall keep records of their actions. The transition from Preliminary Action to Formal Application shall be the responsibility of the applicant.

Section 9: SYSTEM SUITABILITY

The suitability of the applicant's request shall be determined by the following:

a. A test system shall be deployed to verify the situation. This device is to use operating parameters and equipment as prescribed by the Committee and shall operate only in strict accordance with the parameters as determined by it. Such a test operation shall NOT be deemed coordinated. Such operation shall be with the full knowledge of all applicable co-channel users as well as the Board.
b. A computer analysis of existing and proposed operations maybe used, in addition to field-testing. Preferably the Longley-Rice (version 1.2.2) method of signal prediction in the presence of terrain obstructions (e.g. OET Bulletin 69, NTIA Report 82-100).

Any costs for these procedures, beyond that covered by the standard processing fee shall be the responsibility of the Applicant. In the end the Committee, Board or the Membership may decline to recommend the applicants proposed operation.

Section 10: DEFINITION OF AN APPLICATION

A formal application for coordination shall contain the following elements:

a. Completed WWARA Technical Data Form. One form for each transmitter.
b. A cover letter explaining the application.
c. Supporting documentation.
d. Processing fee.

Formal applications are to be made only to the WWARA Secretary. Incomplete applications will not be acted upon by the Secretary and will be returned to the applicant.

Section 11: APPLICATION METHODS

Formal application can be made using one of the following:

a. In person before or after a General Business Meeting.
b. Via US mail to the WWARA Post Office box.
c. Electronically via email using the WWARA web site. NOTE: Electronic applications are not considered complete until receipt of the processing fee.

Section 12: ACKNOWLEGEMENT OF APPLICATION

Upon receipt of a complete application the Secretary shall:

a. Assign a tracking number to the application.
b. Create a correspondence file for the application.
c. Acknowledge receipt of the application to the applicant. This shall be via the correspondence log within 10 days of receipt.
d. Forward a copy of the application, via the Operations Remailer, to the appropriate Committee Chairman.

Section 13: TRACKING NUMBERS

Upon receipt of a complete application the Secretary shall assign a tracking number that will be used to track various aspects of the coordination and record keeping functions.

Within 10 calendar days the Secretary shall post the tracking number in the correspondence log.

Different tracking number groups are assigned for each band:

29 MHz- 1000	50 MHz – 2000	144 MHz – 3000
222 MHz – 4000	430-450 MHz – 5000	900 MHz and above - 6000

One tracking number shall be assigned for each transmitter. The tracking numbers shall be referenced in all related correspondence and communications. The Secretary shall maintain a cross-reference of tracking numbers and system files.

The Secretary shall assign tracking numbers to all current coordinated systems within one year of adoption of these changes.

Section 14: APPLICATION PRIORITIES

Application for coordination shall be acted on a first come first served basis. The following methods shall be used to establish the date of application:

TYPE OF APPLICATON	PRIORITY DETERMINATION
USPS Delivered	Earliest Postmark
At a General Business Meeting	All Applications Shall be Considered Delivered at the Same time.
Via Electronically	Date transmitted by the Applicants ISP as determined by the email header.

Section 15: DISMISSAL OF APPLICATION

The WWARA Board may dismiss an application for coordination for any of the following reasons but may not be limited to the following:

a. Evidence that the applicant misrepresented facts on their application.
b. Submission of an incomplete application.
c. Where it can be shown that intended operation would cause interference to an existing coordinated system that cannot be mitigated.
d. Where the application proposes operations that are in violation of CFR 47, Part 97.

All applicants shall have the right to appeal any Board decision by using the Grievance Procedure elsewhere in these policies.

Section 16: MUTUALLY EXCLUSIVE APPLICATIONS

Applications that are made for the same frequency and or same or similar location shall be deemed mutually exclusive. The determination as to which application shall take priority over the other shall be determined by the Board. The Board shall base its decision on the following factors:

a. Duplication of coverage of an existing system.
b. Coverage of a non-served area.
c. Potential for Interference.
d. Who first proposed the system or operation.
e. Other means of comparison as agreed to by the applicants.

Section 17: COORDINATION PROCESS SEQUENCE-Prior to placing a repeater in operation

a. The applicant submits their Formal Application to the Secretary.
b. The Secretary acknowledges the application Via the Correspondence Log within 10 days of receipt.
c. The Application is referred to the appropriate Coordination Committee via the Operations Remailer for action.
d. If the Coordination Committee recommends approval the matter is forwarded via the Operations Remailer to the Board for approval.
e. If the Board recommends approval the matter is forwarded via the Operations Remailer to the Secretary who places the matter on the agenda for the next general business meeting.

f. The applicant is advised of this action and his presence is requested at the next general business meeting.
g. Upon presentation to the members and no dissenting opinions the applicant shall be issued a Certificate of Coordination (COC) that shall be mailed no later than 14 days after the date of final approval. Upon a dissenting opinion from the members the members shall consider the dissenting opinion and vote on the recommendation of the Board.
h. The COC conveys to the applicant the WWARA's recommendation based on all data available to the WWARA at the time the COC was issued. A COC is not a guarantee of a clear frequency. The suitability of the frequency shall be the responsibility of the applicant. The COC grants the applicant 6 months from the date of final approval to place their system in operation.
i. The Secretary shall inform the impacted adjacent areas of the action.
j. The Secretary shall update the WWARA Official database with in 14 days of the final date of approval.

Section 18: THE RESPONSIBILITY OF THE COC HOLDER

Upon notification from the Secretary of the recommendation of a system frequency the applicant shall be given 6 months to place the system on the air for testing and verification of harmful interference. If the proposed system is not placed in service within the six-month construction period, the WWARA without notice to the applicant withdraws its recommendation to operate and may issue its recommendation to another applicant without recourse. If however the applicant notifies the WWARA within this six month construction period in writing that circumstances require additional time to place the system in operation the WWARA may extend the construction period an additional 6 months not to exceed one year total.

It is the responsibility of the Certificate of Coordination holder to keep the WWARA informed as to the status of the system by having an up to date technical data form on file with the secretary at all times.

Absent special circumstances, any correspondence from the WWARA shall be directed to the Certificate of Coordination holder. To facilitate this correspondence the certificate holder shall keep the WWARA Secretary informed at all times as to their current USPS and e-mail addresses.

Where an organization is the sponsor of a repeater, the Certificate of Coordination holder for such a repeater must be an individual of proper amateur radio license class appointed by the organization. Notification of any change of the Certificate of Coordination holder or system status must be by WWARA Technical Data form submitted and signed by the chief officer of such organization.

All communication regarding coordination shall be in writing. Verbal communication shall not be binding. It is the Certificate of Coordination holder's responsibility to insure the WWARA is in receipt of any and all correspondence.

Section 19: CANCELLATION OF COORDINATION

Any significant station parameter change, as specified on the Certificate of Coordination, made without prior approval by the WWARA shall result in cancellation of the Certificate of Coordination. (See ACCESS, HEIGHT, POWER, FREQUENCY OR LOCATION CHANGES)
The WWARA shall cancel a Certificate of Coordination as follows:

a. For failure to notify the WWARA within 6 months of the initial issuance of the Certificate of Coordination, or extension thereof, as to the status of the system.

b. For failure to occupy and utilize the frequencies as described by the Certificate of Coordination for a period of 6 months without the approval of the WWARA. In no case shall the frequency be held vacant for a period exceeding one year.

c. For operation in violation of WWARA coordination policies.

d. For not operating in accordance with established WWARA band plans.

e. For any system known to be operating in violation of CFR 47 part 97.

f. For failure to renew a Certificate of Coordination prior to its expiration using a completed WWARA Technical Data Form. This form must be kept current and updated at least every five years.

The Data Base Manager as a courtesy will on a semi-annual basis publish all Certificate of Coordinations due to expire within the next 6 months in the "Coordinator". No further notice will be given to the Certificate of Coordination holder. It is the sole responsibility of the Certificate of Coordination holder to monitor and renew its Certificate.

A six month grace period will exist after a certificate expires wherein the holder may renew the certificate by reapplying using a WWARA Technical Data Form and paying an Application Processing Fee.

The Secretary shall notify the coordination holder of the violation / failure to comply via USPS mail. If a written reply is not received within 30 calendar days, delineating the corrective action to be taken to bring the system into compliance, the Certificate of Coordination will be automatically canceled.

Section 20: TRANSFER OF COORDINATION

A Certificate of Coordination of an existing frequency can be transferred to another individual or group provided:

a. Both parties are in agreement.
b. The new proposed Certificate of Coordination holder agrees to abide by the WWARA Coordination Polices and Procedures pays a Renewal Processing Fee and applies to the WWARA for same.
c. There are no reasonable objections to the transfer.
d. There will be no changes in the operating parameters of the system coordination parameters.
e. The new Certificate of Coordination will be issued to the new holder for a five-year period.

Section 21: DIGITAL COORDINATION

The following is the WWARA policy regarding Packet Radio Systems:

a. The WWARA shall not attempt to issue Certificate of Coordination to any digital systems, except when the proposed system requires;
   1. Use of a standard repeater pair or link frequencies.
   2. Use of spectrum previously and or historically coordinated for non-packet relay systems lying outside of established and recognized Packet Radio spectrum.
b. The WWARA shall protect existing co-site and adjacent frequency repeater from the effects of system performance degradation caused by Packet Radio Systems. Conventional FCC interference criteria will be used to determine degradation.
c. The WWARA shall work with the ARRL, regional coordination organizations, as well as local and regional Packet Radio organization in the development of band plans that will set out specific band for Packet Radio communications.

Section 22: SHARED NON PROTECTED REPEATERS

The WWARA has established several Shared Non Protected (SNP) repeater pairs. SNP systems should be registered by frequency and CTCSS tone and be kept current. Registration or Notification of intended use of a SNP frequency may be by either filling out a WWARA Technical data sheet and mailing to the WWARA official mail address or by using the WWARA on-line registration process at www.wwara.org. Questions not answered in this section should be referred to the appropriate WWARA representative or Board member.

Other guidelines for the use of these frequencies are:

a. All users of these frequencies shall share the use of it.

b. Users receive no interference protection from other co-channel users.
c. All systems shall use CTCSS access or other approved methods of limited access. No COR operation of any kind is permitted. The WWARA Band Chairmen shall track utilization of SNP frequencies within their respective bands and make this information available to all those requesting the same.
d. Operation of SNP systems shall be on a non-interference basis with other coordinated systems as defined in CFR 47, Part 97.
e. Use of SNP frequencies shall be restricted to voice/non-data and shall not be linked to other repeaters.
f. The use of radios capable of crossband operation to facilitate a temporary repeater should not be used for a permanent installation but may be used for specific events not to exceed the duration of the event (typically two days). Physical separation of the radios should not exceed 1 mile. Transmitter power shall be the lowest power possible to facilitate communications as per CFR 47, Part 97. The WWARA recommends pre-registering prior to operation. Cross Band Operation section may also apply.
g. The SNP pairs using standard frequency paring are:
   6 meters 51.19 - 52.99
   2 meters 144.53-145.13 and 144.69 - 145.29
   222 MHz 223.12 - 224.72 and 223.24 - 224.84
   440 MHz 445.00 - 440.00 and 448.00 - 443.00
h. Power recommendations (elevations in AMSL, Power is ERP in Watts)
   0-500' - 20 Watts
   501 - 1000' - 10 Watts
   1001' and greater may be recommended on a case by case basis by the WWARA or operated during a declared emergency.

Section 23 CROSS BAND REPEATER / DUPLEX RADIO RECOMMENDATIONS

Cross band repeater or duplex radios should:

a. Never be used to link to an established repeater system or to link two established repeaters together without the express approval of the repeater owners.
b. Be used for temporary, short duration activities only and never installed as a long-term communication facility.
c. Utilize the minimum power necessary as per CFR47, Part 97 to accomplish the desired communications. A transmitter placed in the vicinity of the operator should use a non-radiation load or be configured for minimum power output on a unity gain antenna.
d. Utilize CTCSS decode and encode circuitry to minimize uninvited access and unnecessary frequency congestion. Care should be exercised to use a unique CTCSS tone.
e. Be identified every 10 minutes in accordance with CFR47, Part 97.
f. Be disabled by its operator within 15 minutes of notification of interference or other problems as defined in CFR47, Part 97.
g. Should be continually monitored by the operator to minimize interference.

Recommended cross band frequencies are:

10 Meters	29.600
6 Meters	52.57
2 Meters	146.60
220	224.000
440	440.025
1.2 GHz	1292.500

Section 25: BAND PLANS

Six Meter Band Plan

50.0 - 50.1	CW Only	1) 50.060 - 50.080 Beacon Sub-band
50.1 - 50.3	SSB, CW	1) 50.10-50.125 DX Window
		2) 50.125- SSB Calling
50.3 - 50.6	All Modes	
50.6 - 50.8	Digital	1) Non-Voice Communications.
		2) 50.62 - Packet Calling Frequency
50.8 - 51.8	Rad Control	1) 20Khz Spaced RC channels.
51.0 - 51.1	SSB	1) Pacific DX Window
51.1 - 52.29	FM	1) Repeater inputs
		2) 20Khz channel spacing
		3) Paired with Rptr Outputs +1.7Mhz
		4) 52.19/52.99 SNP Repeater Pair
		5) WWARA coordination recommended
52.31 - 52.55	FM	1) Non-Data, Voice Only. Simplex
		2) 11 Channels, 20Khz channel spacing
		3) 52.525 National Simplex Frequency
		4) 52.51,52.53 not used to protect NSF.
52.57	FM	1) 52.57 Cross Band Linking Frequency
52.59 - 52.79	DATA	1) Non-Voice. Data Only. Simplex
		2) 11 Channels, 20Khz channel spacing
52.81 - 53.99	FM	1) Repeater Outputs
		2) 20Khz channel spacing
		3) Paired with Rptr Inputs (-) 1.7Mhz
		4) 51.29/52.99 SNP Repeater Pair
		5) WWARA coordination recommended

2 Meter Band Plan

144.000-144.050 EME (CW)	
144.050-144.100 General CW and weak signals	
144.100-144.200 EME and weak signal SSB	
144.200-144.275 General SSB operation	
144.275-144.300 Propagation Beacons	
144.300-144.500 New OSCAR subband	
144.500-144.600 FM Repeater/Linear Translator inputs	1) WWARA coordination recommended
144.600-144.900 FM Repeater inputs	1) WWARA coordination recommended
144.900-145.100 Digital Communications	
145.100-145.200 FM Repeater/Linear Translator outputs	1) WWARA coordination recommended
145.200-145.500 FM Repeater outputs	1) WWARA coordination recommended
145.500-145.800 Miscellaneous and experimental modes	
145.800-146.000 OSCAR Sub band	
146.010-146.410 Repeater inputs	1) WWARA coordination recommended
146.420-146.580 Simplex	
146.520 National Simplex Frequency	
146.600 Cross Band repeaters	
146.610-147.390 Repeater outputs	1) WWARA coordination recommended
147.420-147.600 Simplex	
147.610-147.990 Repeater inputs	1) WWARA coordination recommended

Two Meter Additional Notes:
Washington, the adjoining States and BC use 20 kHz spacing between repeater channels.

Repeater Channels are on odd frequencies below 146 MHz. and even frequencies above 146 MHz.

222 MHz Band Plan

222.000 - 222.025 MHz	EME	
222.025 - 222.099 MHz	CW	
222.100	National SSB Calling Frequency	
222.101 - 222.154 MHz	SSB	
222.155 - 222.170 MHz	Beacons	
222.171 - 222.175 MHz	Guard Band	
222.180 - 222.380 MHz	Repeater Inputs	See Note 1
222.400	SNP # 1 Input	See Note 1
222.420 - 223.020 MHz	Repeater Inputs:	See Note 1
223.035 - 223.065 MHz	ACSSB Inputs	See Note 1
223.080 - 223.220 MHz	Repeater Inputs	See Note 1
223.240	SNP # 2 Input	See Note 1
223.260 - 223.380 MHz	Repeater Inputs	See Note 1
223.400 - 223.480 MHz	FM Simplex/FM Packet	
223.500	National FM Calling Frequency	
223.520 - 223.540 MHz	Point-to-Point Control	See Note 1
223.560 - 223.660 MHz	100 kHz Hi Speed Data Channel # 1	
223.660 - 223.760 MHz	100 kHz Hi Speed Data Channel # 2	
223.780 - 223.980 MHz	Repeater Outputs	See Note 1
224.000 MHz	SNP # 1 Output	See Note 1
224.090 MHz	Cross Band Repeater Freq.	
224.020 - 224.620 MHz	Repeater Outputs	See Note 1
224.635 - 224.665 MHz	ACSSB Repeater Outputs See Note 1	
224.680 - 224.820 MHz	Repeater Outputs	See Note 1
224.840	SNP # 2 Output	See Note 1
224.860 - 224.980 MHz	Repeater Outputs	See Note 1
224.995 - 225.000 MHz	Guard Band	

Note 1. WWARA Coordination recommended.
Note 2. All FM Repeaters and simplex operations are on 20 kHz spacing.

UHF Band Plan

420.000 to 426.000 Reserved for ATV repeater, control links and experimental operation.

1) Frequencies in this segment WWARA coordination recommended.
2) 420 MHz to 430 MHz can not be used above line A.
3) Video carrier for ATV is 421.250 MHz. See note five.
4) Some control links already coordinated.

426.000 to 432.000 Reserved for ATV simplex, control links special mode and experimental operation

1) Frequencies in this segment WWARA coordination recommended.
2) 420 MHz to 430 MHz can not be used above line A.
3) Video carrier for ATV is 427.250 MHz. See note 5
4) 430.800 to 431.000 reserved for packet.

432.000 to 433.000 Reserved for weak signal activities. **NO FM ALLOWED**

1) Frequencies in this segment WWARA coordination not recommended.

433.000 to 435.000 Reserved for ATV repeater, auxiliary links and repeater links.

1) Frequencies in this segment WWARA coordination recommended.
2) Video carrier for ATV is 434.00 MHz.

435.000 to 438.000 Reserved for Satellite only by international treaty.

1) Frequencies in this segment WWARA coordination not recommended.

438.000 to 440.000 Reserved for control links, special modes and experimental operation

1) Frequencies in this segment WWARA coordination recommended.
2) 439.800 MHz to 439.975 MHz reserved for Packet.
3) Some existing control links already coordinated

440.000 to 445.000 Reserved for repeater outputs, links and Simplex

1) Frequencies in this segment WWARA coordination recommended
2) Segments designated simplex do not require coordination.
3) 440.000 MHz reserved for WWARA SNP
4) 440.025 reserved for cross band operation. See note 1
5) 440.700 MHz to 440.775 MHz reserved for Packet repeater outputs.
6) 440.800 to 440.900 MHz Packet simplex.
7) 441.000 MHz is designated National Packet simplex frequency.
8) 443.000 MHz reserved for WWARA SNP

445.000 to 450.000 Reserved for repeater inputs, links and simplex

1) All repeaters and links in this segment WWARA coordination recommended.
2) Segments designated simples do not require WWARA coordination.
3) 445.000 reserved for WWARA SNP
4) 445.700 MHz to 445.775 MHz reserved for Packet repeater inputs.
5) 445.800 to 445.900 MHz voice simplex only see note 2 and 3.
6) 445.975 to 446.025 MHz voice simplex only see note 2 and 3.
7) 448.000 MHz reserved for WWARA SNP.

Note 1. This frequency can be used without coordination recommendation for temporary cross band operation from designated frequencies in other bands. High power, big antenna arrays and permanent operations are NOT RECOMMENDED. This frequency is afforded no protection.
Note 2. There is some existing activity coordinated within these segments. Efforts are being made to clear the whole 445.800 through 446.000 MHz segment for exclusive voice simplex operation.
Note 3. 445.825 MHz is designated for shared Public Service simplex. Other frequencies will be added for this use, as they become available.
Note 4. 446.000 MHz is the designated National Simplex calling frequency.
Note 5. WWARA will assist with technical ATV requirements only. Because there is only one channel per segment, the WWARA will not coordinate their exclusive use.
Note 6. All channel spacing is 25 kHz.

902 MHz Band Plan

Segment	Primary User	Use
902-902.3	Amateur	Weak Signal
902.3-903	Amateur	Repeater inputs - See Note 1
903-904	AVM	Experimental Chl 1
903.1	AVM	Amateur Weak Signal Calling
904-912	AVM	Channel 1
912-918	Amateur	ATV - See Note 1
918-926	AVM	Channel 2
926-927	AVM	Experimental Chl 2
927-927.3	Amateur	Digital

927.3-928	Amateur	Repeater Outputs - See Note 1

Note 1: WWARA Coordination recommended.
Note 2: All FM and Data Channel Spacing 25 kHz

1240 – 1300 MHz Band Plan

1240-1246	ATV #1	See Note 3
1246-1248	NB FM Links	See Notes 1 and 2
1248-1252	Digital Communications	
1252-1258	ATV #2	See Note 3
1258-1268	Satellite Uplinks, Experimental, Simplex ATV See Note 4.	
1268-1275	Repeater Inputs	See Note 1 and 2
1275-1276	NB FM Simplex	See Note 1
1276-1282	ATV #3	See Note 3
1282-1288	Wide & Narrow Band FM Links	See Note 1
1288-1295	Repeater Outputs	See Note 1 and 2
1295-1297	NB, Weak signal NO FM	
1297-1300	Digital Communications	

Note 1: All FM simples and repeater channels are on 25KHz spacing.
Note 2: WWARA coordination recommended
Note 3: ATV repeater operation, WWARA coordination recommended.
Note 4: Care should be exercised when using this segment to prevent interference to satellite communications.

Section 26: GRIEVANCE PROCEDURE

Any individual may appeal a WWARA decision. Appeals are first directed to the Board and then if requested to the Membership as follows:

a. **Appeal to the Board**

1. An individual wishing to appeal to the Board shall advise the Secretary of this decision either via email or USSPS.
2. Upon receipt of a request of appeal the Secretary shall advise the appellate via email or USPS of receipt of the appeal and shall determine whether or not this process can be accomplished electronically.
3. All correspondence related to an appeal shall be forwarded to the Operations Remailer.
4. The appellate shall supply the Secretary with all applicable supporting documentation supporting their position, which shall be forwarded to the Operations Remailer.
5. Any member of the Board may request additional information from the appellate.
6. If the matter is handled electronically, the Board shall consider all the facts and render its decision.
7. A simple majority of the Board shall be required to render a final decision.
8. If it is determined, by a majority of the Board, that the matter cannot be resolved electronically a special meeting may be called pursuant to the WWARA Bylaws Article IV Section 4. The time and date for which shall be based on the ability of the applicant and a majority of the Board to attend.
9. The physical Board meeting shall be held in a public location with reasonable effort being made to publicize it.
10. The Physical Board Meeting should be scheduled prior to the next General Business Meeting so as to permit further appeal if needed.

11. A summary of all appeal processes shall be published in The Coordinator.
12. The Secretary shall save all materials related to an appeal.

b. Appeal to the Membership

1. Any individual may appeal a Board decision to the membership.
2. The appellate shall advise the Secretary of their decision to appeal to the membership.
3. The Secretary shall acknowledge via email or USPS the receipt of the appeal and shall advise the appellate as to the date, time and location of the next General Business Meeting.
4. All correspondence regarding an appeal shall be forwarded to the Operations Remailer.
5. The appellate shall be given time at the next General Business meeting of the Association.
6. The fact that there will be an appeal of a Board decision shall be included in The Coordinator containing the meeting notice at which the appeal shall be made.
7. The Secretary shall provide for the appeal within the meeting agenda.
8. The appellate shall be afforded sufficient time to state their case and present supporting documentation.
9. Costs related to the presentations made by the appellate shall be borne by the appellate.
10. The decision of the majority of the members present shall represent the final decision of the WWARA in the matter.
11. The Secretary shall save all materials related to an appeal.

Section 27: MEDIATION OR ARBITRATION BY AN OUTSIDE PARTY

Applicants who feel that a final decision of the WWARA is unfair or is otherwise not justified based on the Association failing to follow its own bylaws, policies or procedures is advised to take the matter to the American Radio Relay League Arbitration Service as established March 1988, the NFCC or a mutually acceptable organization who is a member of the American Arbitration Association.